

REMARKS

Claims 1-32, all the claims pending in the application, stand rejected. Claims 1, 5, 13, 22 and 26 are amended.

Claim Rejections - 35 U.S.C. § 103

Claims 1-32 rejected under 35 U.S.C. § 103(a) as being unpatentable over Poch (5,152,003) in view of Kraemer et al (2003/0065504). This rejection is traversed for at least the following reasons.

The Invention

The present invention is particularly focused on multi-language announcement system for environments having a large number of participants, speaking multiple languages, such as aircraft, ships, trains, seminars, or the like. With a focus on the airline environment, the multi-language announcement system as illustrated in Fig. 1 includes a common server (12), which is coupled on a management side to a plurality of terminals for management (14) and communication (16) for use by flight crew. The server (12) also couples on a participant side to a public address system (18), and plural personal controllers (24), displays (22) and headsets (26) that provide audio and visual communications to passengers. Not shown on the management side is an audio input to the server (12) for use by aircraft staff. The invention, as implemented in an aircraft environment, has several significant features:

A. Customized Language Selection For Plural Participants at Identifiable Locations

Each of the multiple participants or passengers can select a preferred language option via controller 24 or touch-screen display 22 (see Fig. 2), the selection being communicated to and stored in the database server 12 (page 19). The server responds to the selection input and assigns the selected language to the respective passenger, preferably by identifiable seat location. A passenger who does not chose a language is assigned to his/her seat location, as a default, the principal language of the flight. The correlation between an identifiable seat location (presumably identified by a seat number) and language is stored in a memory related to the server (for example, as in a lookup table or the like, as would be understood by those skilled in the art). The language selection is changeable during use, as taught at page 19.

B. Automated Concurrent Translation Capability

The server has the capability of machine translating, in real time using translation software for one or both of audio and text communications, from a first language of the attendant or pre-recorded piece into any one or more of a plurality of second languages of a passenger. The system avoids the problems with sequential transmissions of the same message in different languages. There also is the ability to translate text from the second language into the first language, when a passenger communicates with the attendant.

C. Language Selectable By and Separately Deliverable To Individual Participants

The language to be used in a display 22 and a headset 26 at a passenger location is selected by the passenger. The message, as translated into the selected one of the plural languages, is separately sent to each display 22 and/or headset 26, based on the response of the controller to the selection by each passenger (and the correlation of seat location and language as stored in memory). Specifically, the controller responds to the selections by setting up transmission paths within the communication system in order to deliver the message as translated into the selected language to the passenger. The controller is preprogrammed to deliver the message to a display and/or headset only to the extent that there is a principal or default language used in the event no selection of another language is made. In any event, the headset and/or display are not programmed themselves. One skilled in the art would understand that the transmission paths may be wired (with or without a receiver) or wireless (with a receiver). Thus, the system has the capability of selectively delivering the original text as a translation into the language selected by the passenger, to the passenger location where a selection was made.

D. Concurrent Public Announcements

In addition to the personalized delivery of messages in a selected language at a passenger's seat, the system permits public announcements, both audio and visual, on a shared screen in the principal or default language. The messages can be delivered concurrently over the public address system while they are also being delivered as a translation to a respective personal location.

E. Interactive Communication With Translation Both Ways

The system also envisions an ability of a passenger to communicate with cabin attendants via the controllers, display 22, or a touch screen. A variety of selectable buttons can be used for such communication. The system also contemplates free-text field communications, using the passenger's controller 24 in the passenger's chosen language. Even use of a Dictaphone is considered. Such communication would be translated at the server 12 and displayed or presented to the cabin attendants by terminals 14, 16.

F. Automated Assignment of Language

In addition to selections made by the passenger from a console, pre-set language choices are also contemplated, based on booking information or historical data. Thus, there are automated assignments of language based on stored characteristics of the user

G. Combined Live and Pre-recorded Announcements

In addition to live communications, the invention contemplates the use of the system for prerecorded announcements, where prestored translations of standard messages are utilized.

Poch

The Examiner relies upon Poch as the primary reference in framing the rejection of the claims. However, Poch is significantly different from the present invention.

A. No Identifiable Location for Patrons

Poch concerns a communication system for a museum or tourist attraction, where patrons are given a patron unit or wand having a receiver and speaker and the patrons move from location-to-location and play a message that is particularly focused on a different exhibit at each location. The patrons are not assigned a given seat or location, to which a communication in a particular language is fed. The patron unit or wand is pre-assigned a language.

B. No Automated Translation Capability

The Examiner admits that Poch does not have any teaching or suggestion for automated translation from one language to another. The messages are pre-stored in the various languages supported by the system and a given message in a given language is transmitted at a pre-defined

frequency to receivers that were pre-assigned to receive that frequency (and language). There is no translation at all.

C. No Language Selectable By and Separately Deliverable To Individual Participants

Each patron/user is provided with a message receiver/player that is uniquely pre-assigned a particular language and a particular frequency for transmissions related to that language. The messages are broadcast on different frequencies of the FM band in a respective language and are received and played by the individual receiver/player that is tuned to a particular frequency. In short, the system comprises plural separate subsystems that independently respond with preprogrammed messages in a predetermined language to queries by a user.

Clearly, the programming in Poch is not conducted at the central transmitter and is not in response to selection by a particular patron for a particular location, as all units share the same keying assignments for the various locations, although the assigned frequencies may differ, as indicated at col. 8, line 28. The patron units or wands are pre-programmable for messages in different languages, as explained at col. 8, line 53.

Each message is playable at the demand of the user, based upon a keyboard operation that selects the particular message, as related to a particular location or exhibit. The user has control over when the messages are played, but cannot select the language. As explained at col. 2, line 65, a transmitter is settable to transmit each message in one language on separate non-interfering frequencies in a locality cell and to transmit translations of each message on separate non-interfering frequencies. As explained at col. 3, line 19-22, two users desiring the same message but in different languages would enter the same message number but would receive the respective messages on two different frequencies.

D. No Concurrent Public Announcements

There is no teaching that a concurrent public announcement of the message in a principal or default language can be effected.

E. No Interactive Communication With Translation Both Ways

The message transmissions in Poch are one-way, from a central transmitter to each wand or receiver, in a pre-assigned language. While the wand or receiver can command the transmission of a message, there is no translation in either direction.

F. No Automated Assignment of Language

Since there are no selections of languages by a patron, there is no default or primary language, and no automated assignment based on characteristics of the user, since all languages are pre-programmed in the wand or receiver.

G. No Combined Live and Pre-recorded Announcements

There are no live communications in Poch, as the system only contemplates use of pre-stored translations of standard messages.

Summary

In short, the system disclosed in Poch is not for an aircraft or similar environment where multiple patrons are assigned a specific seat or other identifiable location, nor does it have a customized language choice on the basis of a language selection by the patron. Further, there is no translation capability, concurrent public announcement, interactive communication or automated assignment of language to a particular unit. A new language is reselected and reassigned to a given unit by a programmer, not the user.

However, in order to further clarify the distinction of the invention over Poch, additional limitations to the specific multi-person/assigned location-type environment have been added.

Kraemer et al

The patent to Kraemer et al concerns a system and method for providing instant translations of verbal (and text) communications, using known translating techniques (paragraph [0022]). The patent suggests the use of such system in airports for audio and textual communications [0026] and on mass transportation (trains - conductor announcements [0035]). There are two relevant embodiments.

Fig. 2 of Kraemer et al teaches an embodiment with a single processor 202 and a single input device 208 connected to a single database 204, although connection to multiple databases containing multiple languages may be utilized, as explained at paragraph [0033]. Two output devices, a speaker and handset 212/228 may be utilized so that each person has a unique output device 212/228 by which they receive translated communications, as explained at paragraph [0034]. The communications link 220 transmits translated communications to a receiver 222 which presents the communications to a user by an output device. In this embodiment, all translations are accomplished by a single device. Also, a conductor or the like (flight attendant) would have the first device while one or more receiving devices would be given to patrons on an as-needed basis, as explained at paragraph [0035].

In a further embodiment illustrated in Fig. 3, an input device 308 in the form of a microphone or stored communication is coupled to a single processor 302, which itself couples to a single database 304. The processor 302 and database 304 are coupled to provide a translation of communications input from input device 308 and to output a translation to a first output device in the form of a headset 312 and a second output device in the form of a speaker 316 for first and second users, respectively. The use of a human or automated input is taught at [0037]. As explained at paragraph [0021], multiple databases may be used, each for a respective language or a common database may be used for multiple languages [0024]. The reference contemplates concurrent transmission of public address messages and translated messages into a selected language at paragraph [0026]; however, the translation is of the public address message as broadcast into the translation system. Throughout the disclosure, the patent teaches that the communications among various components may be wired or wireless and the components may be collocated or remote. Further, the system contemplates interactive communications, as illustrated in the system of Fig. 1, where two input devices and two output devices are shown in respective locations. While separate databases and processors are taught in this embodiment, the patent indicates that a single processor may be used [0033]. Further, with respect to the output devices, the patent teaches that each person may have a unique output device by which they receive translated communications as necessary [0034].

There was no teaching of an automated assignment of language to a passenger beforehand, but the assignment appears to be based on programming of a unique output device, as explained at paragraph [0034].

A. Fixed Location for Patrons

Kraemer is concerned with multiple patrons in a specific location, such as a plane or train but the locations are not disclosed to be identifiable. There is nothing in Kraemer et al that suggests selective delivery of one of multiple language messages to respective passengers on the basis of an identifiable respective location.

B. Automated But Sequential Translation Capability

The patent to Kraemer et al concerns a system and method for providing instant translations of verbal (and text) communications, using known translating techniques (paragraph [0022]).

However, Kraemer et al does *not* teach that the translations can be concurrent. At best, the suggestion from the limited disclosure of only two receiving locations is that the transmissions may be concurrent for a single language but are sequential for multiple languages.

C. Language Selectable By and Separately Deliverable To Individual Participants

As explained at paragraph [0021], multiple databases may be used, each for a respective language or a common database may be used for multiple languages [0024].

D. Concurrent Public Announcements

The reference contemplates concurrent transmission of public address messages and translated messages into a selected language at paragraph [0026]; however, the translation is of the public address message as broadcast into the translation system, into one other language. There is no concurrent translation into plural languages.

E. Interactive Communication With Translation Both Ways

The system contemplates interactive communications, as illustrated in the system of Fig. 1, where two input devices and two output devices are shown in respective locations. While

separate databases and processors are taught in this embodiment, the patent indicates that a single processor may be used [0033].

F. Automated Assignment of Language

The system in Kraemer et al contemplates the automatic detection of a speaker's language and the selection of a translation algorithm. This results in the automated assignment of a language to a participant.

G. Combined Live and Pre-recorded Announcements

There are live communications in Kraemer et al and the system only contemplates use of pre-stored translations of standard messages and instantaneous translations of input speech or text.

Summary

Notably, the system disclosed in Kreamer et al fails to teach an environment where multiple passengers are assigned a specific seat or other identifiable location and a customized language delivery is effected on the basis of a language selection by the passenger.

The combination of Poch and Kreamer fail to teach or suggest express limitations that presently appear in the pending claims. Specifically, Applicants have amended the independent claims to narrow the focus to the concurrent delivery of messages in multiple languages, based on electronic selection, at respective individual locations. This feature captures the essence of the invention in its most preferred embodiment and environment while providing an appropriate scope of protection in light of the close teachings of the prior art.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

/Alan J. Kasper/

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON OFFICE

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CUSTOMER NUMBER

Alan J. Kasper
Registration No. 25,426

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